

Application No.: 09/547,369

Docket No.: 20421-00059-US

REMARKS

Claims 1-21 are pending in the application. Favorable reconsideration of the application is requested.

Withdrawal of the rejection of claims 1-4, 8-11, and 14-17 under 35 U.S.C. § 102(e) as being anticipated by Edsall et al. (U.S. Pat. No. 6,735,198) is requested.

The present invention provides for a method apparatus and computer usable medium which learns source addresses at a destination target port of a network switch. In accordance with amended claim 1, a data frame enters a receive port from a first device having a source address, and is intended for a second device having a destination address also contained within the data frame. The receive data frame is processed so that the destination address identifies the location of a target port connected to the second device. In this way, the data frame may be directly conveyed to the appropriate target port without flooding the switch with frames destined for every port on the switch. When the target port receives the frame, it learns and stores the source MAC address at the target port. As set forth in the specification, and now identified more clearly in claim 21, in the event the incoming frame contains a destination address not recognized by the ingress forwarding processor, the frame is then flooded to all possible ports which could be connected to the second device.

Turning now to the cited Edsall et al. reference, the Examiner relies on col. 3, lines 51-53 to support the contention that the data frame containing a source MAC address is learned locally at the target port. However, col. 3, lines 60-61, states that the source address is learned at the line card 1 (LC1) which receives the incoming frame. In reviewing the cited reference, particularly at the passages noted in the Office Action, the frame is transmitted to the station B, however the source address of station A is learned at the incoming forwarding engine of line card 1 (FE1). It does not state that the source address is learned at the egress port, as required by the rejected claims.

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In reviewing the cited reference, the system disclosed learns source MAC addresses at the incoming ingress port (see col. 6, lines 29-34). The ingress forward engine performs a flood to fabric operation on the frame which conveys the frame to all possible ports containing the destination address. In accordance with the invention, a MN frame is generated to compliment the flooding operation. The egress card issues an MN frame to the ingress card, forcing the engine on the ingress card to update its forwarding table with the contents of the MN frame.

The foregoing does not constitute learning a source address at a destination port as is set forth in the rejected claims. The present invention, by learning the source addresses at target ports identified from an destination address, avoids duplication of data bases, since each local data base at each port only contains those addresses needed and used. Subsequent exchanges between the network devices corresponding to the source and destination addresses can be performed more efficiently since all source addresses have been learned at target ports which will be ingress ports for the potential source device.

Withdrawal of the rejection of claims 5, 7, 12, 18 and 20 under 35 U.S.C. § 103 as being unpatentable over Edsall et al. (U.S. Pat. No. 6,735,198) further in view of Brice Jr. et al. (U.S. Pat. No. 4,825,206) is requested. As each of the rejected claims carry the limitations of the parent claims, requiring learning of source addresses at the target port connected to a device having a destination address contained in an incoming frame, is not seen how the combination of the references can yield or suggest the subject matter.

The conclusion contained in the Office Action responsive to the arguments presented in the Appeal Brief states that:

Edsall et al. shows an example in which the source MAC addresses learned locally to the target port, when the data frame is forwarded within the same line card of the multi port switch as discussed in item 2 above, i.e. the ingress port and target port are on the same line card.

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However the claims as amended require that there be a learning capability at each port. For instance, claims 8 and 9 require a processor at the ingress port as well as a processor at the target port. In this way, addresses can be learned in data bases associated with each of the ports.

Further, there is no indication that the MAC address is learned locally to the target port when the frame is received at the target port. The learning that appears to take place is at an ingress port.

In view of the foregoing favorable reconsideration is believed to be in order.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0563, under Order No. 20421-00059-US from which the undersigned is authorized to draw.

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Respectfully submitted,

By



George R. Pettit, Reg. No. 27,369
CONNOLLY BOVE LODGE & HUTZ LLP
1990 M Street, N.W., Suite 800
Washington, DC 20036-3425
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant